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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,827	04/19/2001	Ojas T. Choksi	062891.0524	2042

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EXAMINER
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TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/839,827	<b>Applicant(s)</b> CHOKSI, OJAS T.	
	<b>Examiner</b> Joseph D. Torres	<b>Art Unit</b> 2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 January 2005.  
2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.  
    4a) Of the above claim(s) 19-21 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-18, 22-25 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 19 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
    a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
        1. ☐ Certified copies of the priority documents have been received.  
        2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
    \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/19/01, 6/10/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I (Claims 1-18 and 22-25) in the reply filed on 01/04/2005 is acknowledged.

### ***Specification***

2. The disclosure is objected to because of the following informalities: The Application Serial No. on page 1 of the specification must be filled in. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-18 and 22-25 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. Claim 1 recites, "receiving a frame for a packet from a wireless link, determining a position of the frame in a set of related frames for the packet". The omitted structural cooperative relationships are: the relationship between "a frame", "a set of related frames" and "the packet".

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Claims 7, 13 and 22 recite similar language as in claim 1 and hence have the same 35 U.S.C. 112 problems as claim 1.

Claims 5, 11, 17 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites, "a first subset of frames in the set comprise a first allowed number of retransmissions, a subsequent second subset of frames in the set comprise an increased allowed number of retransmissions, and a still subsequent third subset of frames comprise a still further increased allowed number of retransmissions." A set is an unordered group of elements and **not** a number.

Claims 11 and 17 recite similar language as in claim 5 and hence have the same 35 U.S.C. 112 problems as claim 5.

Claim 24 is incomprehensible. In particular the two main clauses appear unrelated and the first main clause needs to be rewritten so that it is clearly understood.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 4, 6, 7, 9, 10, 12, 13, 15, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Donnan; Robert A. (US 4439859 A).

35 U.S.C. 102(b) rejection of claims 1, 7 and 13.

Donnan teaches in response to at least unsuccessfully receiving a frame for a packet from a wireless link, determining a position of the frame in a set of related frames for the packet (col. 2, lines 22-24 in Donnan teaches that the Number  $N(S)$  indicative of the position of a frame is found for each incorrect or bad frame; Note: incorrect frames are unsuccessfully received a frame); determining an allowed number of retransmissions for the frame based on the position of the frame in the set of related frames (col. 2, lines 17-21 in Donnan teaches that  $V(T)$  is a value representative of the order in which a frame is retransmitted; col. 13, lines 35-40 in Donnan teaches that previously retransmitted messages are retransmitted as long as long as the receive sequence number  $N(R)$ , representative of the send sequence number  $N(S)$  of the most recently received non-retransmitted error free frame, is greater than  $V(T)$ ; hence Donnan teaches determining an allowed number of retransmissions for the frame  $N(S)$  based on the position  $V(T)$  of the frame in the set of related retransmitted frames); and requesting retransmission of the frame up to the allowed number of retransmissions (col. 13 of Donnan teaches checkpoint CP is used as a retransmission request requesting retransmission up to the allowed number of retransmissions for an frame determined by  $N(R)$  and  $V(T)$ ).

35 U.S.C. 102(b) rejection of claims 3, 4, 9, 10, 15 and 16.

The set of frames including retransmissions is all of the frames.

35 U.S.C. 102(b) rejection of claims 6, 12 and 18.

Errors are always based on the quality of the transmission link. Since only erred frames are retransmitted, retransmissions are based on the quality of the link.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donnan; Robert A. (US 4439859 A) in view of Rezaiifar; Ramin et al. (US 6618375 B2, hereafter referred to as Rezaiifar).

35 U.S.C. 103(a) rejection of claim 22.

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Donnan teaches in response to at least unsuccessfully receiving a frame for a packet from a wireless link, determining a position of the frame in a set of related frames for the packet (col. 2, lines 22-24 in Donnan teaches that the Number  $N(S)$  indicative of the position of a frame is found for each incorrect or bad frame; Note: incorrect frames are unsuccessfully received a frame); determining an allowed number of retransmissions for the frame based on the position of the frame in the set of related frames (col. 2, lines 17-21 in Donnan teaches that  $V(T)$  is a value representative of the order in which a frame is retransmitted; col. 13, lines 35-40 in Donnan teaches that previously retransmitted messages are retransmitted as long as long as the receive sequence number  $N(R)$ , representative of the send sequence number  $N(S)$  of the most recently received non-retransmitted error free frame, is greater than  $V(T)$ ; hence Donnan teaches determining an allowed number of retransmissions for the frame  $N(S)$  based on the position  $V(T)$  of the frame in the set of related retransmitted frames); and requesting retransmission of the frame up to the allowed number of retransmissions (col. 13 of Donnan teaches checkpoint CP is used as a retransmission request requesting retransmission up to the allowed number of retransmissions for an frame determined by  $N(R)$  and  $V(T)$ ).

However Donnan does not explicitly teach the specific use of CDMA and IP packets.

Rezaiifar, in an analogous art, teaches use of CDMA and IP packets.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Donnan with the teachings of Rezaiifar by including use of CDMA and IP packets. This modification would have been obvious to one of ordinary

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skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of CDMA and IP packets would have provided the opportunity for error protection in a Radio Link Protocol.

35 U.S.C. 103(a) rejection of claim 25.

Errors are always based on the quality of the transmission link. Since only erred frames are retransmitted, retransmissions are based on the quality of the link.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joseph D. Torres, PhD  
Primary Examiner  
Art Unit 2133

